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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/772,069 02/04/2004 Vytutas Getautis 3216.61US02 4527

24113 7590 03/29/2007  
PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A.  
4800 IDS CENTER  
80 SOUTH 8TH STREET  
MINNEAPOLIS, MN 55402-2100

EXAMINER
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MCCLENDON, SANZA L

ART UNIT	PAPER NUMBER
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1711

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS 03/29/2007 PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/772,069	<b>Applicant(s)</b> GETAUTIS ET AL.	
	<b>Examiner</b> Sanza L. McClendon	<b>Art Unit</b> 1711	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 November 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 1-22 and 36-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

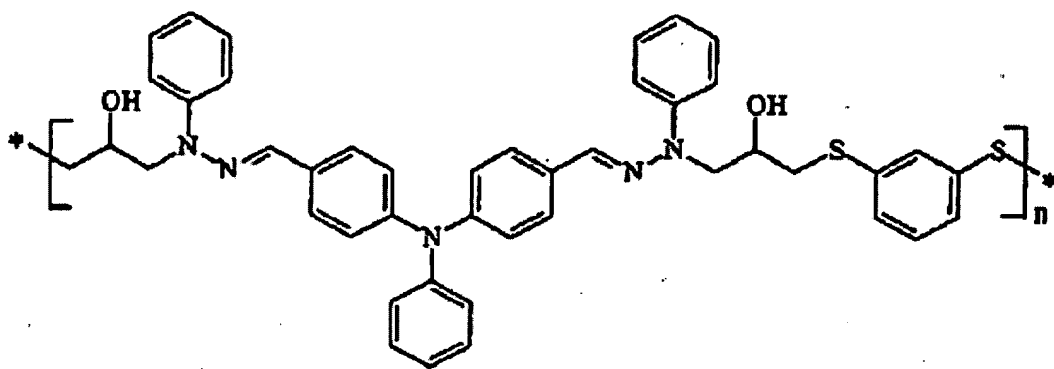
- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/04</u> . | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

*Election/Restrictions*

1. Applicant's election without traverse of Groups II - IV (claims 1-22 and 36-43) in the reply filed on January 9, 2007 is acknowledged. Additionally, applicant's species election of chemical structure (4) represented by the below found formula is hereby acknowledged.

*Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

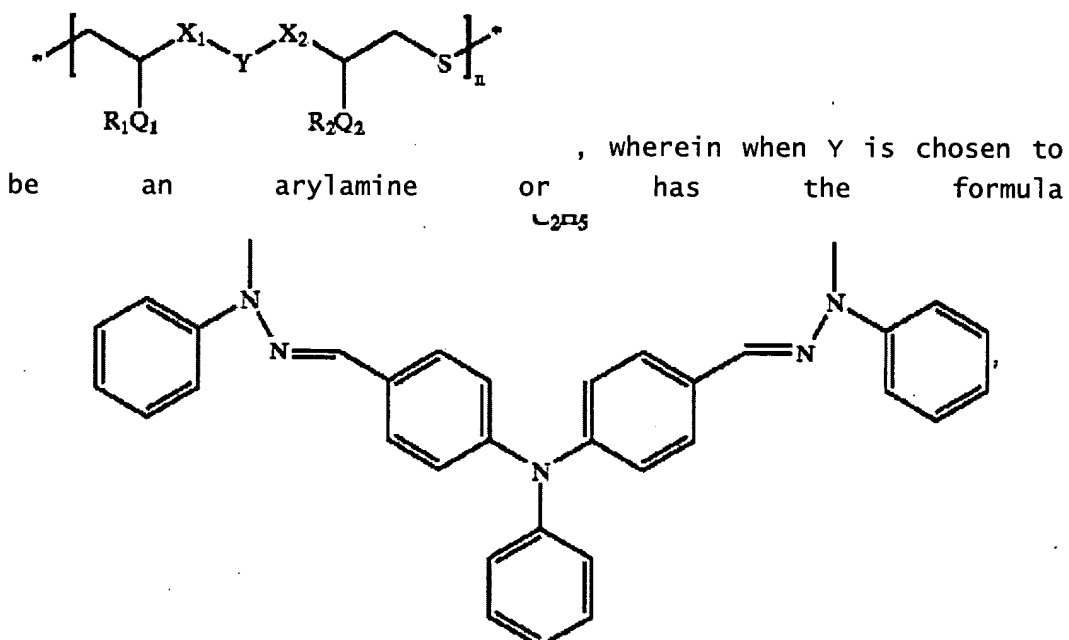
A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting

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application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

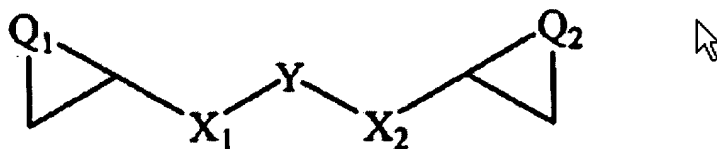
3. Claims 23-35 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over provisionally allowed claims 1-6 of copending Application No. 10/883,453 (PGPub App. 2006/0003241). Although the conflicting claims are not identical, they are not patentably distinct from each other because appear to comprise overlapping subject matter. Co-pending '453 sets forth in claims 1-6 (provisionally allowed) a polymeric charge transport material having the formula:



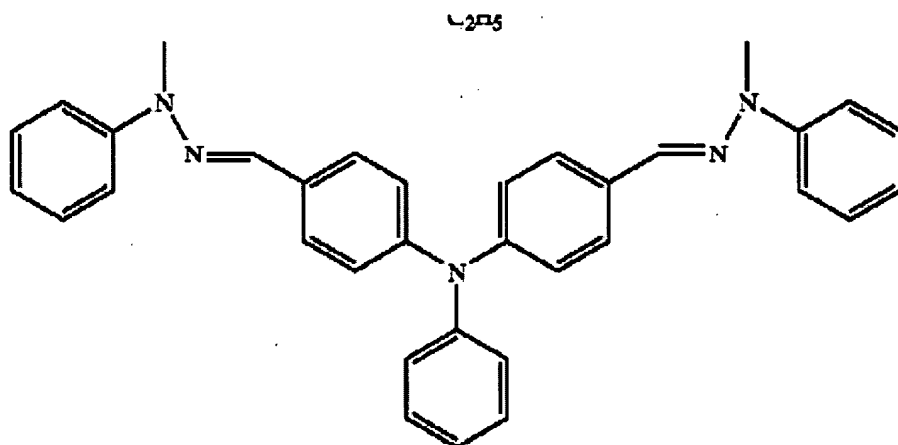
and Y further comprises a N, N'-disubstituted hydrazone group, when X1 and X2 are chosen independently to be  $-(\text{CH}_2)_m$ -groups, when R2 and R1 are chosen to be hydrogen atoms (H), and when Q1 and Q2 are chosen to be oxygen (O) appears to be applicant's elected species as well as reading one instant claims 23-25 and 27. Regarding instant claims 28-35, it appears that co-pending claims 29-34 of the PGPub application shows that co-pending '453 has an enabling disclosure (as can be seen on page 5), which sets forth (defines) the method form making the material of co-pending claims 1-6, which appears to read on said instant claims 23-25. Said method includes at least one starting

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material (compound) for making the polymeric charge transport material having the above-defined formula. Said starting compound can be found in co-pending PGPUB claim 29 or page 5 of '453 and has the formula



wherein, when Y is an arylamine or the formula:



and when Y further comprises a and Y further comprises a N, N'-disubstituted hydrazone group, when X1 and X2 are chosen independently to be -(CH2) m-groups, when R2 and R1 are chosen to be hydrogen atoms (H), and when Q1 and Q2 are chosen to be oxygen (O) appears to be applicant's elected species as well as reading one instant claims 28-35. The multifunctional compound of instant claim 28 can be seen in co-pending on page 5 or the PGPUB version in claim 35-the thioacetamide. Thus one of ordinary skill in the art at the time of the invention could have obtained/made/used the polymeric charge transport material of instant claims 23-35 from co-pending '453 and USPGPub 2006/0003241.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. Claims 23-25 and 27 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5, 9-13, 17-21, and 26-30 of U.S. Patent No. 7,118,840. Although the conflicting claims are not identical, they are not patentably distinct from each other because they appear to comprise overlapping subject matter. The co-pending sets forth charge transport polymers the may comprise sulfur atoms and arylamine group in the polymeric linkages, especially when n is 4, which

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appear to overlap with the instantly claimed polymeric charge transport material of claims 23-25 and 27.

5. Claims 23-25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 10, 14, 17, 20, 26, 27, and 30 of U.S. Patent No. 6,214,503. Although the conflicting claims are not identical, they are not patentably distinct from each other because they appear to comprise overlapping subject matter. Said '503 claims are not patentably distinct because both claim a polymeric charge transport polymer, which may be a dimer ( $n = 2$  in the instant claims) and when  $n = 0$  in said co-pending, comprising sulfur atoms, and arylamine groups.

*Claim Rejections - 35 USC § 102*

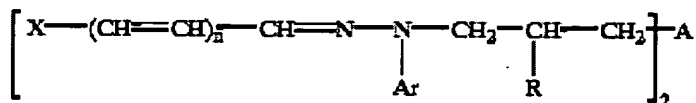
6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

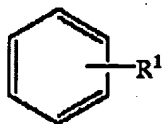
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 23-26, and 28-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Gaidelis et al (6,214,503).

Gaidelis et al sets forth a polymeric charge transport material having the formula:



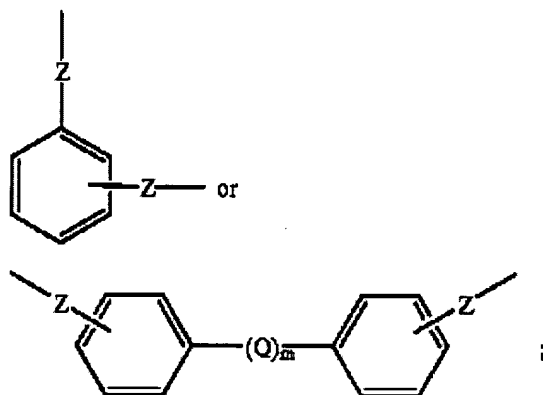
wherein , when X is an alkyl-substituted carbazole or a N, N' disubstituted arylamine, n is 0, when



Ar is

and R<sup>1</sup> is H, when R is an OH groups, and A has either

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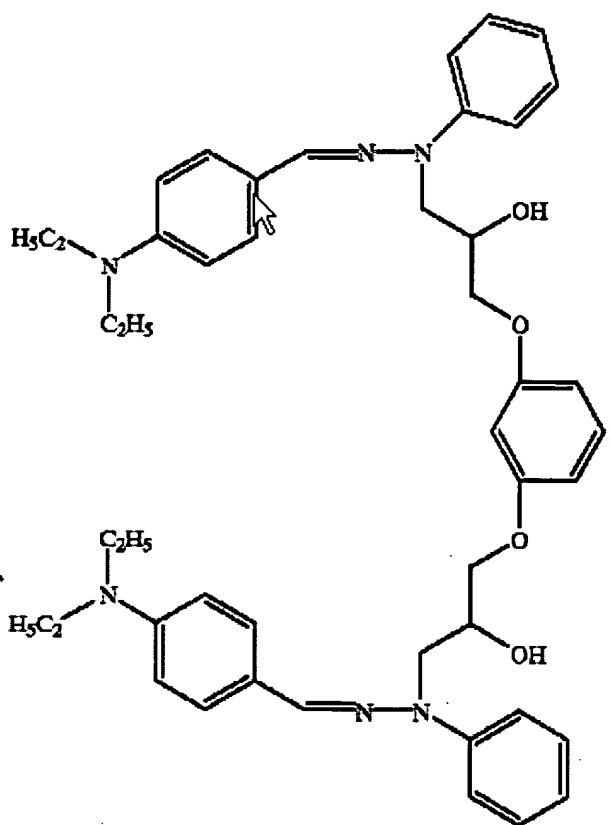
Z is O or S; Q is O, S, or CH<sub>2</sub>; and m is 0 or 1.

formula:

it appears the formula of instant claim 1 is met, especially when n is at least 2 per definitions found in instant claim 1. It is deemed that the polymeric material of instant claim 1, although called a polymer by definition encompasses dimers (n=2). Instant claims 28-35 are deemed anticipated by the teachings set forth in column 12 in the method of making compound (6), which has the formula

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(6)



Per the method 1-(2,3-epoxypropyl)-1-phenyl hydrazone of 4-diethylaminobenzaldehyde was used as a starting material for compound (6) above this anticipates the compound of instant claim 28, wherein E1 and E2 would be reactive epoxy groups. Said epoxy compound is reacted with dihydroxylbenzene, which is a multi-functional compound. Additionally, compounds have reactive thiol groups, such as di (4-mercaptophenyl) methane; can be used as the multi-functional compound reacted with said epoxy-hydrazone compound. Thus when said starting material is reacted with the multi-functional thiol compound it appears applicant's elected species is anticipated. Therefore it appears that the instant claims are anticipated by the teachings of Gaidelis et al (6,214,503).

### Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Getautis et al in Polymer 46(19) p.



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7918-7922 (2005) sets forth applicant's polymeric charge transport materials, however the publication date is later than the filing date of the instant application. Grazulevicius et al from the Proceedings of the 8<sup>th</sup> Polymers for Advanced Technologies International Symposium from September 13-16, 2005 set forth applicant's instantly claimed polymeric charge transport materials.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Sanza L. McClendon  
Examiner

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3/27/07

SMC